## SEMESTER S7

# WEB PROGRAMMING

| Course Code | PEERT 751 | CIE Marks | 40 |
|---|---|---|---|
| Teaching Hours/Week (L: T:P: R) | 3:0:0:0 | ESE Marks | 60 |
| Credits | 3 | Exam Hours | 2 Hrs. 30 Min. |
| Prerequisites (if any) | None | Course Type | Theory |

**Course Objectives:**

1. Learn how servers and web browsers communicate.
2. Learn how to use HTML elements to construct well-structured web pages.
3. Explore advanced CSS methods such as animations, transitions, and responsive design.
4. Learn how to write PHP scripts to handle form submissions and perform server-side processing.
5. Learn how to integrate HTML, CSS, PHP, and MySQL to create dynamic and interactive web applications.

KTU SPECIAL

## SYLLABUS

| Module No. | Syllabus Description | Contact Hours |
|---|---|---|
| 1 | **WWW:** Web Basics, URI's & URL, Search Engine Optimization (SEO), Analytics, Domain Names & Hosting, Ftp & Third party tools<br>**HTML5:** Introduction to HTML5, Basic Structure for HTML, Basic HTML tags-Headings, Hyper Links, Images, Special Characters and Horizontal Rules, Lists, Tables, Forms, Internal Linking, Meta Elements, HTML5 Form Input Types, Input and Data List Elements, Autocomplete Attribute, Page Structure Elements, Multimedia-HTML5 Audio & video elements | 8 |
| 2 | Introduction to Stylesheets : Introduction to CSS-Basic syntax and structure-Inline, Internal and External Styles, Embedded Style Sheets, Conflict Resolution, Linking External Style Sheets-Exploring CSS Selectors-Properties, values, Positioning Elements: Absolute Positioning, Relative | 7 |

| | | |
|---|---|---|
| | Positioning, Backgrounds,List Styles,Element Dimensions, Table Layouts-Box Model and Text Flow-div and span, Basics of Responsive CSS, Media port & Media Queries. | |
| 3 | JavaScript:Introduction, Examples of JavaScript in browser, Basic JavaScript Instructions: Statements, Comments, Variable, Data Types, Arrays, Expressions, Operators, Functions and Objects, Variable Scope, Object, Arrays are objects, Browser Object Model, DOM, Global Objects: String, Number, Math, Date. Decision Making and Loops: if statement, if…else statement, switch statement, Loops: Key Concepts, for loops, while loops, do while loops; DOM: Document Object Model (DOM),Working with DOM tree, Accessing Elements, Nodelists, Selecting Elements: Using Class Attribute, Tag Name, CSS Selector, repeating actions for an entire nodelist, Looping through a Nodelist, Traversing the DOM, Adding or Removing HTMLcontent, Update Text and Markup, Adding/Removing Elements, Event Handling: Different event types and ways to bind an event to an element: using DOM Event Handlers, using Event listeners, using Parameters with Event Listeners; the Event Object, Event Delegation, User Interface Events, Event Bubbling<br>ECMAScript: Versions, Features, Introduction, Var Declarations and Hoisting, let declaration, Constant declaration, Function with default parameter values, Default parameter expressions, Unnamed parameters, the spread operator, arrow functions, object destructuring, array destructuring, sets and maps, Array.find(), Array.findIndex(), template strings, Javascript classes, callbacks, promises, async/await | 10 |
| 4 | **PHP**: Introduction, Building blocks of PHP, Variables, Data Types Simple PHP program, Converting between Data Types, Operators and Expressions, Flow Control functions, Control statements, Working with Functions, Initialising and Manipulating Arrays, Objects, String Comparisons,String processing with Regular Expression<br>**Advanced PHP**: Form processing and Business Logic, Cookies, Sessions, MySQL Integration: Connecting to MySQL with PHP, Performing CREATE, DELETE, INSERT, SELECT and UPDATE operations on MySQL table, Working with MySQL data, Reading from Database Dynamic Content. | 10 |

KTU SPECIAL

**Course Assessment Method**

**(CIE: 40 marks, ESE: 60 marks)**

**Continuous Internal Evaluation Marks (CIE):**

| Attendance | Assignment/ Microproject | Internal Examination-1 (Written) | Internal Examination- 2 (Written ) | Total |
|---|---|---|---|---|
| 5 | 15 | 10 | 10 | 40 |

**End Semester Examination Marks (ESE)**

*In Part A, all questions need to be answered and in Part B, each student can choose any one full question out of two questions*

| Part A | Part B | Total |
|---|---|---|
| • 2 Questions from each module.<br>• Total of 8 Questions, each carrying 3 marks<br><br>**(8x3 =24 marks)** | • Each question carries 9 marks.<br>• Two questions will be given from each module, out of which 1 question should be answered.<br>• Each question can have a maximum of 3 subdivisions.<br><br>**(4x9 = 36 marks)** | **60** |

KTU SPECIAL

## Course Outcomes (COs)

At the end of the course students should be able to:

| Course Outcome | | Bloom's Knowledge Level (KL) |
|---|---|---|
| **CO1** | Comprehend the principles of the WWW and create web pages using HyperText Markup Language (HTML) | **K3** |
| **CO2** | Implement Cascading Style Sheet to apply style in HTML pages | **K3** |
| **CO3** | Add functionality to web pages by using Java Script | **K3** |
| **CO4** | Construct websites using advanced sever side programming tool PHP | **K3** |
| **CO5** | Use PHP to create dynamic web pages and perform MySQL database operations | **K3** |

Note*: K1- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate, K6- Create*

KTU SPECIAL

## CO-PO Mapping Table (Mapping of Course Outcomes to Program Outcomes)

| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 1 | 1 | - | - | 1 | - | - | - | - | - | - | 1 |
| **CO2** | 1 | 1 | - | - | 1 | - | - | - | - | - | - | 1 |
| **CO3** | 2 | 2 | - | - | 1 | - | - | - | - | - | - | 1 |
| **CO4** | 2 | 2 | - | - | 2 | - | - | - | - | - | - | 1 |
| **CO5** | 2 | 3 | 2 | 1 | 2 | - | - | - | - | - | - | 2 |

Note: *1: Slight (Low), 2: Moderate (Medium), 3: Substantial (High), -: No Correlation*

| Text Books | | | | |
|---|---|---|---|---|
| **Sl. No** | **Title of the Book** | **Name of the Author/s** | **Name of the Publisher** | **Edition and Year** |
| **1** | Internet and World Wide Web How To Program | Paul J. Deitel, Harvey M. Deitel, Abbey Deitel | Pearson Education | 5th Edition, 2012 |
| **2** | HTML and CSS: Design and | Jon Duckett | Wiley | 2011 |

| | | | | |
|---|---|---|---|---|
| | Build Websites | | | |
| **3** | JavaScript and JQuery : Interactive Front–End Web Development | Jon Duckett | Wiley | 2014 |
| **4** | Understanding ECMAScript 6: The Definitive Guide for JavaScript Developers | Nicholas C. Zakas | William Pollock | 2016 |
| **5** | PHP, MySQL & JavaScript All in One | Julie C. Meloni | Pearson - Sams Publishing | 5th edition, 2017 |

| **Reference Books** | | | | |
|---|---|---|---|---|
| **Sl. No** | **Title of the Book** | **Name of the Author/s** | **Name of the Publisher** | **Edition and Year** |
| **1** | Programming the World Wide Web | Robert W Sebesta | Pearson | 8th Edition, 2015 |
| **2** | PHP 6 and MySQL 5 for Dynamic Web Sites: Visual QuickPro Guide | Larry Ullman | Pearson | 5th Edition, 2017 |
| **3** | The Joy of PHP: A Beginner's Guide to Programming Interactive Web Applications with PHP and mySQL | Alan Forbes | Plum Island | 6th Edition, 2020 |
| **4** | Head First PHP & MySQL | Lynn Beighley & Michael Morrison | O'Reilly | 1st Edition, 2009 |
| **5** | PHP: A Beginner's Guide | Vikram Vaswani | McGraw-Hill Education | 1st Edition, 2008 |
| **6** | Learning PHP, MySQL, JavaScript, CSS & HTML5 | Robin Nixon | O'Reilly | 2nd Edition, 2012 |

KTU SPECIAL

| Video Links (NPTEL, SWAYAM…) | |
|---|---|
| **Module No.** | **Link ID** |
| **1** | https://nptel.ac.in/courses/106106156/ |
| **2** | https://www.php.net/ |
| **3** | https://www.mysql.com/ |
| **4** | https://www.w3schools.com/php/ |
| **5** | https://www.w3schools.com/sql/ |

KTU SPECIAL